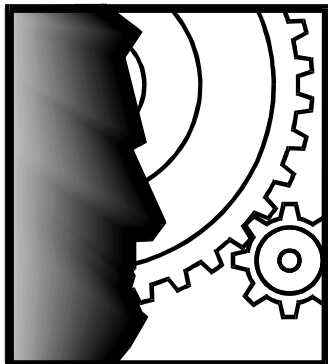




Restoring a Flooded Water System

Electric Motors



- Do not start submerged electric motors until they have been cleaned, dried and checked for safety.
- Disconnect the motor. An ejector or jet pump motor may be a separate unit mounted on the pump or the end bell of the motor may be part of the pump. The separate motor unit can be disconnected and serviced easily. With the second type, remove the pump and motor as a unit. It is not necessary to remove the drop pipes.
- Take the motor to an electrical repair shop. In the shop, the motor should be checked for any short circuits or grounding caused by moisture. If the motor was submerged in mud and water, it should be thoroughly cleaned. Windings should be dried in a drying oven. The bearings should be lubricated before you use the motor again.
- Clean and dry electrical controls and pressure switches. Check all wiring for short circuits.

Pumps

Pumps are usually damaged by sediment deposited in the bearings. Clean pumps. Check valves for silt and sand. Remove all dirt and water from the gears in the gear box, and replace the lubricant with fresh oil.

Submersible Pumps

The bearings on water-lubricated pumps will not be damaged by flood waters, since these bearings are constantly submerged in water. As soon as possible, flush clean water down the casing to remove sediment and silt. Then disinfect the well.

Centrifugal Pumps

Centrifugal pumps contain two sets of oil-lubricated bearings along the drive shaft between the motor and pump. If the pump has been flooded, dismantle the container bracket and remove the bearings. Clean the bearings, or replace them if worn out.

This document is IFAS
publication DH 412.

Adapted by UF/IFAS from:
Document DH-072,
IFAS Disaster Handbook for
Extension Agents
(developed by the
Cooperative Extension
Service for the benefit of
Florida's citizens)

Close-coupled centrifugal pumps contain no bearings, so there is little chance of flood damage, except to the electric motor.

Injector-type Pumps

These pumps usually contain water-tight packing at the ground surface, with sealed impellers. Flood waters will probably not damage this type of pump.

Storage Tank and Piping

The storage tank and piping should be all right unless muddy water was pumped through it. If tank is contaminated, disinfect the entire system with a strong chlorine solution. Use 1 quart household laundry bleach or check with local health department for recommended solution strength.



Open all faucets while the system is being filled. Do not close the spigot until a definite smell of chlorine is evident. Do not use the system for 24 hours. Then start the pump and run water from all faucets until the chlorine odor is gone.

Wells

Wells will probably not be damaged structurally from floods, but they may be contaminated. Have your well tested by health officials before you use the water.

If the well is located in a low spot, it may be partly contaminated with silt from flood waters draining into it. If so, the well and entire water system should be disinfected. To disinfect the well system:

- Pump the well until water is clear.
- Pour a solution of 1 quart liquid laundry bleach (Clorox, Purex or a similar hypochlorite solution) mixed in 3 gallons of water into the well casing. Leave it there at least 4 hours, or preferably overnight.
- Pump the chlorinated water into the piping system, and leave it there for at least 2 hours or even overnight.
- The next day, pump and flush out the system until the taste and odor of chlorine are no longer apparent. Two days after you have disinfected the water system, take a sample of water according to recommended procedure, and have it tested for purity. Boil or treat all drinking water until a water test indicates that water is safe for all purposes.

Cisterns

Do not drink water from a flooded cistern until you disinfect the cistern and the entire piping system. To disinfect the cistern:

- ① Use an auxiliary pump to remove the water and empty the cistern. Do not pump water through the pipeline distribution system.
- ② Wash down the walls and ceiling with clean water, and pump out the dirty water with an auxiliary pump.
- ③ Check the cistern walls, ceiling, and floor for cracks where ground water could come in.
- ④ Disinfect the interior with a solution of 1 quart liquid laundry bleach in 3 gallons of water. Be sure the bleach contains no soap. Apply the chlorine solution with a sprayer or scrub with a stiff broom. Swab or pump out the disinfecting solution that collects in the bottom of the cistern.
- ⑤ The piping system may have been contaminated, so flush it with a solution of bleach and water mixed according to directions above. Leave the chlorine solution in the pipes for at least 2 hours (overnight if possible) before you drain them.
- ⑥ Fill the cistern with water for use. This water will have a chlorine taste for a while, but it will be safe for all purposes.

Water Softeners

Regenerate the softener before you use it. Use clean, chlorinated water to backwash the filterbed.